

PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 355 (FREDERICK ROAD) AND SHADY GROVE ROAD IN MONTGOMERY COUNTY, MARYLAND. MODIFICATIONS INCLUDE THE REPLACEMENT OF THE EXISTING PEDESTRIAN SIGNAL HEADS WITH LED 16 INCH PEDESTRIAN COUNTDOWN SIGNALS, THE INSTALLATION OF APS PUSHBUTTONS FOR ALL SIGNALIZED CROSSWALKS, AND THE CONSTRUCTION OF ADA-COMPLIANT CURB RAMPS AND SIDEWALK. MD 355 IS ASSUMED TO RUN IN AN NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN NEMA SIX PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 355 APPROACHES OPERATING CONCURRENTLY AND THE SHADY GROVE ROAD APPROACHES OPERATING SPLIT PHASED. LEADING EXCLUSIVE LEFT-TURN PHASING IS PROVIDED FOR NORTHBOUND MD 355 AND LAGGING EXCLUSIVE LEFT-TURN PHASING IS PROVIDED FOR SOUTHBOUND MD 355. PUSHBUTTON ACTUATION ACROSS MD 355 WILL REMAIN. INTERSECTION LIGHTING IS PROVIDED ON EACH CORNER OF THE INTERSECTION. UNDERGROUND INTERCONNECT IS PROVIDED TO O'NEILL DRIVE. NEW PUSHBUTTON ACTUATION WILL BE INSTALLED ACROSS BOTH LEGS OF SHADY GROVE ROAD. ALL PEDESTRIAN PUSHBUTTONS WILL BE APS.

NEW AUDIBLE PUSHBUTTON ACTUATED PEDESTRIAN PHASES WILL BE PROVIDED ACROSS THE NORTH LEG OF MD 355 AND THE EAST AND WEST LEGS OF SHADY GROVE ROAD.

APS MESSAGE FOR CROSSING THE NORTH LEG OF OF MD 355 (FREDERICK ROAD):

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS FREDERICK AT SHADY GROVE, WAIT".

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

APS MESSAGE FOR CROSSING THE EAST AND WEST LEGS OF SHADY GROVE ROAD:

A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL ANNOUNCE "WAIT TO CROSS SHADY GROVE AT FREDERICK, WAIT".

B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

CONTROLLER REQUIREMENTS

THE EXISTING NEMA SIZE '6' BASE MOUNTED CABINET AND EIGHT-PHASE CONTROLLER AND ALL ASSOCIATED EQUIPMENT WILL CONTINUE TO BE USED. A 2-WIRE CENTRAL CONTROL UNIT WILL BE ADDED TO THE CABINET.

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. CEDRIC WARD
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ASSISTANT DISTRICT ENGINEER - MAINTENANCE
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THE CONTACT PERSONS FOR MONTGOMERY COUNTY ARE AS FOLLOWS:

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MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION
PHONE: (240) 777-8762

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
1001	2	EA	MAINTENANCE OF TRAFFIC
2001	20	CY	CLASS 2 EXCAVATION
2002	3	CY	TEST PIT EXCAVATION
6001	550	LF	STANDARD TYPE A COMBINATION CURB AND GUTTER 12 INCH GUTTER PAN 8 INCH DEPTH
6002	1200	SF	5 INCH CONCRETE SIDEWALK
6003	300	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8002	1	EA	2-WIRE CENTRAL CONTROL UNIT
8008	6	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8016	6	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8024	1	EA	REMOVE & DISPOSE OF EQUIPMENT (PER ASSIGNMENT)
8040	100	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8041	36	LF	WOOD SIGN SUPPORTS UP TO 4" X 6"
8042	91	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8043	800	SF	REMOVE & RESET DECORATIVE BRICK SIDEWALK
8044	100	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8055	1200	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8057	1500	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)
8068-A	6	EA	F & I BREAKAWAY PEDESTAL POLE (ANY SIZE) PAINTED BLACK

EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA:
NONE

EQUIPMENT LIST "A"

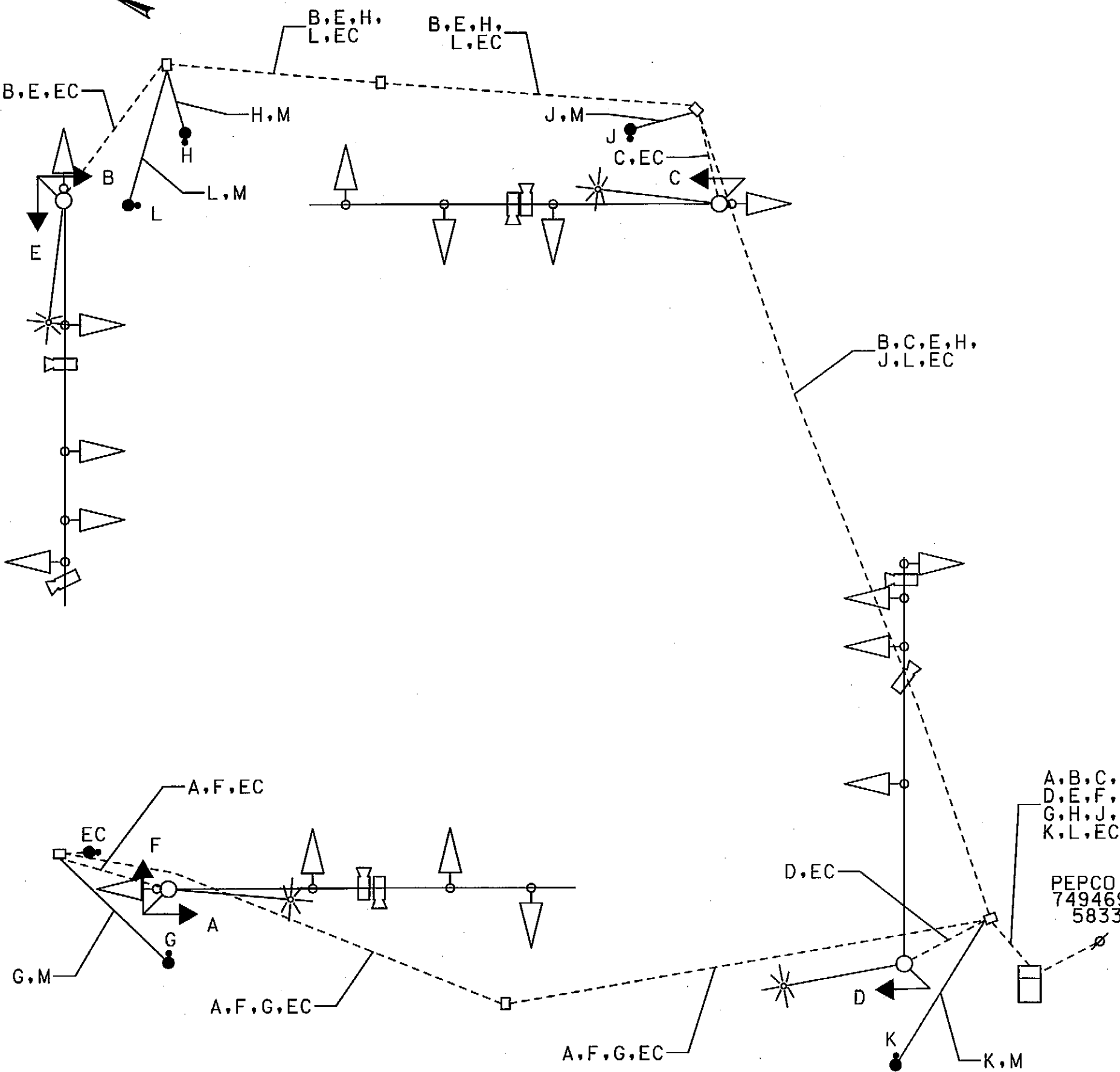
A. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY SHA:

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
9570	80	SF	[UPDATED] SHEET ALUMINUM GROUND MOUNTED SIGN - 1 EACH M3-1 (30"x15") - 1 EACH M1-5 (48"x36") - 1 EACH M6-1 (30"x15") - 6 EACH R10-3(1) (9"x15") - 6 EACH W11-2 FY (30"x30") - 3 EACH W16-7p(R) FY (24"x12") - 3 EACH W16-7p(L) FY (24"x12")
9571	11	SF	[UPDATED] SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN - 2 EACH D-3(1) (VARIABLEx16") DUAL FACED

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
PHASE 1 + 5	←G	G	←G	G	G	←R	R	←R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	←Y	G	←Y	G	G	←R	R	←R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	←R	G	←R	G	G	←R	G	←R	G	G	R	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW
2 + 5 CHANGE	←R	Y	←R	Y	Y	←R	G	←R	G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	←R	R	←R	R	R	←G	G	←G	G	G	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
2 + 6 CHANGE	←R	R	←R	R	R	←Y	Y	←Y	Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 3	←R	R	←R	R	R	←R	R	←R	R	R	←G	←G	G	R	R	R	R	DW	DW	DW	DW	DW	DW
3 CHANGE	←R	R	←R	R	R	←R	R	←R	R	R	←G	←G	G	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4	←R	R	←R	R	R	←R	R	←R	R	R	←G	←G	G	R	R	R	R	DW	DW	DW	DW	DW	DW
4 CHANGE	←R	R	←R	R	R	←R	R	←R	R	R	←G	←G	G	R	R	R	R	DW	DW	DW	DW	DW	DW
PHASE 4 ALT	←R	R	←R	R	R	←R	R	←R	R	R	←G	←G	G	R	R	R	R	DW	DW	DW	DW	WK	WK
PED CLEARANCE	←R	R	←R	R	R	←R	R	←R	R	R	←G	←G	G	R	R	R	R	DW	DW	DW	FL/DW	FL/DW	FL/DW
4 ALT CHANGE	←R	R	←R	R	R	←R	R	←R	R	R	←G	←G	G	R	R	R	R	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	←FL/R	FL/Y	←FL/R	FL/Y	FL/Y	←FL/R	FL/Y	←FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM



TOD NO: MO242B58
SHA NO: XX439-17
MD 355 @ Shady Grove Road

WIRING KEY

A,B,C, } 5 CONDUCTOR ELECTRICAL CABLE
D,E,F } (NO. 14 AWG)
G,H,J, } 2 CONDUCTOR ELECTRICAL CABLE
K,L } (NO. 14 AWG)
M } STRANDED BARE COPPER GROUND
WIRE (NO. 6 AWG)
EC } EXISTING CABLE

SHA STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
**MD 355 (FREDERICK ROAD) AT
SHADY GROVE ROAD
GAITHERSBURG, MARYLAND**

GENERAL INFORMATION SHEET

SCALE NONE DATE MAY 22, 2012 CONTRACT NO. XX4395185
DESIGNED BY NJM COUNTY MONTGOMERY
DRAWN BY NJM LOGMILE 15035512.73
CHECKED BY BSH T.I.M.S. NO. K927
F.A.P. NO. T.O.D. NO.
T.S. NO. 2382D-GI SG-03 OF SG-03 SHEET NO. 3 OF 3

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